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What is claimed is:

1. An emulsion fuel comprising 55 to 90 % by weight of a heavy oil, 45 to 10 % by weight of water, and a small amount of a catalyst.

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- 2. The emulsion fuel as defined in claim 1, wherein said catalyst is prepared by mixing caustic soda with calcium dichloride.
- 3. The emulsion fuel as defined in claim 2, wherein said catalyst comprises 50 % by weight of caustic soda and 50 % by weight of calcium dichloride.
 - 4. The emulsion fuel as defined in claim 2, wherein said calcium chloride is partly substituted with calcium sulfate.
- 15 5. The emulsion fuel as defined in claim 1, wherein said catalyst is 0.3 to 0.8 % by weight.
 - 6. The emulsion fuel as defined in claim 1, wherein said heavy oil is bunker fuel oil C or petroleum.

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7. A method for preparing an emulsion fuel comprising the steps of:
mixing a composition comprising 55 to 90 % by weight of a heavy oil, 45 to
10 % by weight of water with a small amount of a catalyst; and
emulsifying the mixture with an emulsifier.

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- 8. The method as defined in claim 7, wherein said catalyst is prepared by mixing caustic soda with calcium dichloride.
- 9. The method as defined in claim 8, wherein said catalyst comprises 50 % by weight of caustic soda and 50 % by weight of calcium dichloride.

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10. The method as defined claim 8, wherein said calcium chloride is partly substituted with calcium sulfate.

- 5 11. The method as defined claim 7, wherein said catalyst is 0.3 to 0.8 % by weight.
 - 12. The method as defined claim 7, wherein said heavy oil is bunker fuel oil C or petroleum.
- 13. A catalyst composition for preparing an emulsion fuel by emulsifying a mixture of a heavy oil and water, the composition comprising 50 % by weight of caustic soda and 50 % by weight of calcium dichloride.
- 15 14. A catalyst composition for preparing an emulsion fuel by emulsifying a mixture of a heavy oil and water, the composition comprising 50 parts by weight of caustic soda and 50 parts by weight of a mixture of calcium dichloride and calcium sulfate.

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